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BS News

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MECHANICAL & ELECTRICAL BUILDING SERVICES

MAY 2001

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BSNews*

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The Institute of Domestic Heating Engineers (IDHE);
The Registered Heating Contractors Association;
The Maintenance, Energy & Environmental Technology Association (MEETA) which incorporates energy managers and maintenance managers;
The Energy Conservation & District Heating Association; The Institute of Plumbing;
The Irish Home Builders Association (IHBA);
Builders Merchants/Trade Supply Outlets; Irish Property & Facilities Managers Association.

In addition, Irish Building Services News circulates to independent building services contractors and key executives in industry. Government, Semi-State and local authority bodies. Essentially, our circulation is virtually saturation coverage of all those with an interest and/or involvement in the industry.

BMS — Urgent Need for Training & Support

While last month's leader focussed on Peter McCabe's comments in relation to apprenticeships, we continue on the same theme this month but in relation to building management systems.

A recent survey by the Irish Energy Centre confirmed that building management systems are now readily accepted and are being installed more and more in both new-build and refurbishment projects.

However, the survey also confirmed what the industry at large has suspected for some time ... end-users are not getting the most out of their systems.

The problem is not with the systems themselves but rather with the lack of a structured and uniform approach to after-sales support, training and supervision.

Thankfully, it has now been clearly identified. All that remains is for those involved in the sector — including the education providers — to get together and devise a programme to address the issue.

Eugene Connolly of the Irish Energy Centre points the way forward in his introductory article to the BMS feature in this issue. See pages 11 through to 30 inside, absorb the information presented, and then make a conscious decision to talk to your fellow-BMS suppliers with a view to establishing a uniform apprach to the problem.

The penetration of building management systems is now ripe for take-off ... addressing the after-sales support, training and supervision issue will accelerate the rate of penetration and yield far higher returns for all concerned.

Training & Career Development

Ask the Expert

See page 31

Seamus Murran, DIT

IN THIS ISSUE

Rainwater Utilisation from WILO Pumps

People involved in the Irish building services industry will be familiar with Wilo Engineering Ltd's circulating pump ranges, but over recent years Wilo has constantly developed and extended its product portfolio to include for other pumping applications such as drainage and sewage. Now Wilo has also launched a range of packaged rainwater utilisation sets, to further expand its product base.

The trend to re-use run-off rainwater has been firmly established by our neighbours on mainland Europe, with countries like Germany, Holland and Denmark taking the lead. If you consider that approximately 5% to 7% of water usage in an average domestic environment is used specifically for drinking and cooking purposes, our country offers plenty of opportunities for the harnessing of rainwater for use in toilets, washing machines, irrigation, sprinkler systems, etc. This practice reduces the amount of mains water required significantly, with obvious benefits from both an economic and environmental viewpoint.

The Wilo Rain Collector II RWN set comprises a 1500-litre multi-chamber collection tank, self-priming pump and associated controls. The unit is pre-piped and fitted with a mains water make-up connection to maintain continued operation during dry periods. The total storage volume can be extended by the addition of extension tanks, if required.

The Wilo Rainwater AF systems are designed for operation in conjunction with an onsite cistern or collector tanks. There are three basic model options available — the AF 22, which is a wall-mounted set complete with a 22-litre storage tank; the AF 150, which is a twin-pump unit complete with a 150-litre storage tank; and the AF 400, again a twin-pump set with 400 litres of storage. Further units can be supplied on request, if required, with three or four pumps, and multiple storage tanks.

All pumps used are self-priming and the AF units are supplied with an integrated mains water connection for make-up of storage. Operation is controlled via an electronic "rain control" panel which offers water level indication, low water alarm, auto changeover and BMS link as some of its many functions. All components in contact with the fluid handled are corrosion-proof.

Wilo Engineering has also introduced the new TM & TMW 32 range of submersible drainage water pumps. These now supercede the previous TM 30 range. The TMW range is fitted with the new Wilo patented Turbulator system as standard, a feature that causes a turbulating action around the pump suction and base. This action keeps solids in suspension and helps prevent the formation of sludge and build-up in the sump, reducing maintenance required in clearing sumps. All pumps in the new range have a 10mm solids handling capacity, and have built-in motor thermal overload protection. A new addition is the HD version, which is suitable for aggressive fluids (PH 5 to 9.5) such as sea water, pool water, condensate or partly de-mineralised water.

Contact: Wilo Engineering Ltd.
Tel: 061 - 410963;
e-mail: sales@wilo.ie
Web : www.wilo.ie

The Wilo Rain Collector II RWN set comprises a 1500-litre multi-chamber collection tank, self-priming pump and associated controls.

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Siemens Damper Actuators

Siemens Building Technologies has further extended its position as one of the largest damper actuator manufacturers with the launch of the 7Nm & 15Nm series within its OpenAir™ range of actuators for direct mounting onto damper shafts. These complete the range and offer a solution for every HVAC application.

Both linear and rotary versions are available as part of the standard range. Models with and without externally-adjustable end switches and with position feedback potentiometers are available without affecting the external dimensions. Another major feature is the elimination of elaborate stroke conversion kits.

Fixing the actuator onto the damper requires only one screw. The new versions have a self-centering mounting connection, together with the "cat's eyes" that provide clear indication of the damper position, even in poor light or at a distance. Both improve general operation.

Contact: Asea Brown Boveri. Tel: 01 - 405 7300; Sirus Engineering Systems. Tel: 01 - 460 2600.

From the Siemens Building Technologies' 7Nm and 15Nm Series of damper actuators.

Powrmatic's award-winning duct heater module (DHM).

Powrmatic Heater Set to Transform Air Handling Systems

A new space-saving heater, developed specifically for air handling equipment, is set to transform the design of air handling systems.

Powrmatic's award-winning duct heater module (DHM) features a compact design that provides a long-awaited alternative to conventional gas fired unit heaters which are considerably larger in size and designed to stand alone as independent air heaters. DHM is also ideal for the conversion of existing hot water, steam or electric systems to gas.

The DHM's unique design in heat exchanger and burner technology provides far superior turndown rations — up to 7:1 — compared to conventional units. The tube arrangement also offers low resistance to airflow, allowing the option of reduced fan motor power.

With a width of only 325mm and no requirement for inlet and outlet transition sections, the DHM enables designers to reduce the length of finished air handling units.

Modules come in a choice of output ratings from 30kW-140kW and can be used independently or in series of up to three. Combustion efficiency and emissions comply with current EC guidelines. Additionally, with up to 7:1 turndown ratio DHM provides much greater control, plus the opportunity for fuel saving.

Contact: Patrick Lowry, Powrmatic Irl. Tel: 01 - 452 1533.

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Euro Vision Thanks Wilo

The Euro Vision was held on May 12th in Copenhagen Denmark.The National football stadium was used to stage the event. A new sliding roof was fitted to the stadium to convert it to a multipurpose arena and a new space-heating and air conditioning system was designed and installed to provide climatic comfort for the audience of 35,000 who attended the contest.

The design engineers choose four Wilo IPn150/180 - 18.5/4 circulating pumps to pump water to the air handling units in the refurbished arena.These pumps were supplied by Wilo Denmark A/S. The Wilo IPn range are close-coupled, monobloc, inline circulating pumps with a temperature range -10°C to + 140°C. Connection sizes are DN40 to DN200 PN16 Flanges.

From the Wilo IPn150/180 - 18.5/4 circulating pump range

The pumps will handle a flow rate up to 500m3/hr and heads up to 65 meters, and are suitable for heating or chilled water with a glycol content of 40%.
Contact: Wilo Engineering.
Tel: 061 - 410963.

RAGS Results

Results from the latest RAGS Golf Society outing at St Annes Golf Club last month were as follows:-

Overall Winner: Iggy Maloney (9), 38pts

Class 1

Winner: Tom McDonald (19), 32pts

Second: Brian Carthy (17), 30pts

Class 2

Winner: Dan Dowling (20), 36pts

Second: Michael Keating (20), 35pts

Front 9: Michael McLoughlin (10), 17pts

Back 9: Brendan Kilgallon (28), 17pts

Visitor

Winner: John Lott (14), 33pts

Second: Tom Molloy (20), 32pts

Thermo Systems on the Move

Thermo Systems has moved to new, purpose-designed premises located at Thermo Systems House, Calmount Park, Ballymount, Dublin 12.
Contact: Aidan Lynch, Thermo Systems.
Tel: 01 - 409 2588; Fax: 01 - 408 9095; 24-Hour Service Number: 203 6922; email: info@thermosystems.ie

IDHE/Precision Heating Training Initiative

Precision Heating has been agent for Bentone AB, Sweden since the early 1960s and has provided oil and gas burners to the Irish market with an emphasis on technical back-up and service support. Since early April the company has provided a one-day training course on domestic and non-domestic forced draught gas burners at the request of Joe Newman, Training Officer, IDHE. The course provider is Martin Hogan who is a service technician with PH Ltd for nearly 30 years, and is also a member of the IDHE. This course is provided free of charge by PH Ltd.

The content of the course is designed to supplement the gas installers course supplied by Bord Gais and leads to certification by the IDHE. It covers all aspects of forced draught gas burners, from pre-installation site check and suitability of the equipment for gas conversation to the commissioning of the equipment. This course concentrates on gas combustion and the dangers of incorrect settings which lead to CO and unreliable equipment.

There is also a hands-on part of the course which deals with a domestic forced draught gas burner type Bentone STG120 rated 14-47kW and a site visit to work on a Bentone BG500 2-stage rated 200-600kW. This covers the working, servicing and combustion analysis of the gas burning equipment in detail using Seitron analyser and Seitron monometor which are also supplied by PH Ltd.

Martin says that the interest in the course has taken him by surprise and what started out as an information day has now turned into an IDHE-accredited service technician's course which also qualifies for CPD points.
Contact: Martin Hogan, Precision Heating.
Tel: 01 - 842 8763.

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MX461 Magnetic Valves from Siemens

The MX461 range of magnetic valves is available from Siemens Building Technologies. These valves provide an exceptionally-fast positioning time of under two seconds and unbeatable precision control, regardless of the load. They offer virtually infinite stroke resolution and "drop-by-drop" control, even with low loads.

From the MX461 range of magnetic valves from Siemens Building Technologies.

The MX461 is capable of control accuracy down to as little as 0.1K, making it suitable for exacting levels of HVAC control. The magnetic valves are available with a variety of open interfaces and can be driven by virtually any of the controllers available on the market today.

The MX461 are built to work better and longer than conventional valves and to emphasise this Siemens offer a 5-year warranty on the magnetic valves.

Contact: Asea Brown Boveri. Tel: 01 - 405 7300; Sirus Engineering Systems. Tel: 01 - 460 2600.

Luas Smoke Vents By Control Aer

With the new Luas system getting closer to completion every day, Control Aer is delighted to be involved with this prestigious and very public project. Where the general public is involved, safety is always paramount, and as many studies have shown, smoke is potentially a bigger killer than fire. With this in mind Control Aer has been involved with the design and supply of smoke exhaust dampers and louvres for the Luas line. The smoke damper selected for the project was the 1045-10. This damper — like all Control Aer smoke dampers — meets the stringent new European test Standards IS EN 1366-2, which has surpassed the old BS test.

Contact: Control Aer. Tel: 01 - 626 0177.

Crystal Clear by Breezair

Waterford Crystal rebuilt its glass-melting furnace at its Dungarvan plant during August 2000. As part of this project it set out to improve the working environment for the workforce, who were exposed to radiant heat from the furnace. Knowing this was a difficult task a project team was assembled. The project objective was to design a system that would deliver a dedicated supply of fresh cool air to each individual operator, who would have his own control over the volume and direction of the supply.

When the design was complete, Waterford Crystal set about finding the most suitable air distribution and conditioning system for the task. After thorough investigation of the various systems available, they eventually concluded that the Breezair system offered the best solution with regard to air volume, cooling capacity, and running costs.

The Breezair running costs are said to be about one sixth of that of conventional systems. A further bonus was that the Breezair system is environmentally friendly, an important consideration in the current climate.

The new system was installed and commissioned and has met all the project objectives.

John Lawlor is the principal of Carrick-on-Suir based Breezair. It is a relatively new company with a nationwide network of appointed sales/installation dealers.

Contact: John Lawlor, Breezair. Tel: 051 - 641567.

Exterior view of glass-melting furnace area at Waterford Crystals' Dungarvan plant showing part of the Breezair installation.

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AIR HANDLING UNITS DELIVERED IN DAYS RATHER THAN WEEKS!

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* Choice of 30 stock sizes electric or LPHW heater batteries
* Separate fan boxes available
* Wide range of controllers attenuators etc. available

Air handling units have finally joined the ranks of the "readily available stock" from Control Aer's extensively-stocked depots. Control Aer's new units have standardised the design to further simplify the selection process. As a Lindab product, quality is always guaranteed. The all-new comprehensive catalogue answers every conceivable question and detail for on-site installation, together with performance criteria including noise, heating/cooling (KW's), fan performance, etc. Control Aer is finally making air handling unit selection simple and common sense, removing the long drawn-out process by delivering a standardised modular unit for all requirements

(Larger units available on request).

Contact: Michael Klotz, Control Aer.

Tel: 01 - 626 0177;
email: mike@controlaer.com

For further details, specifications and prices on the full range, contact:-

CONTROL AER

Tel: **1890 258456** · Fax: **01 6260434** · Email: **sales@controlaer.com** · www.controlaer.com

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The Jimco Compact range of odour controllers are engineered to specifically treat odour problems in the environment. The units provide the most efficient and environmentally-friendly method of inhibiting the ability of bacteria, micro-organisms (viruses, moulds and yeasts) to reproduce in air and on surfaces. The net result is odour free air and improved hygiene.

A small fan inside the unit induces air across a UV-C lamp which kills bacteria and micro-organisms in the air. The UV-C lamp also produces ozone and this destroys airborne odours and organic compounds.

The OZ500 compact odour controller is designed to continuously treat odour problems in almost any imaginable application. The OZ500 is totally safe for use in occupied areas as it is designed to operate below acceptable human ozone exposure limits.

The OZ1000 and OZ2000 compact odour controllers are used for the "shock treatment" of odour and surface contamination. These units have limitless applications.

Contact: Martin Deevey, Joe Delaney, Jimco Ireland. Tel: 01 - 460 0741.

From the Jimco Compact range of odour controllers

GEA Happel Geko 2001 UK fan coil unit from H&M Engineering

Geko 2001 UK Fan Coil Range

Air treatment specialist GEA Happel Ltd has launched the new Geko 2001 UK fan coil unit range in Ireland through H&M Engineering. The horizontally-mounted (floor or ceiling) chassis style, 260mm deep units are competitively priced and available in 4-pipe or 2-pipe, or electric heat versions in six sizes.

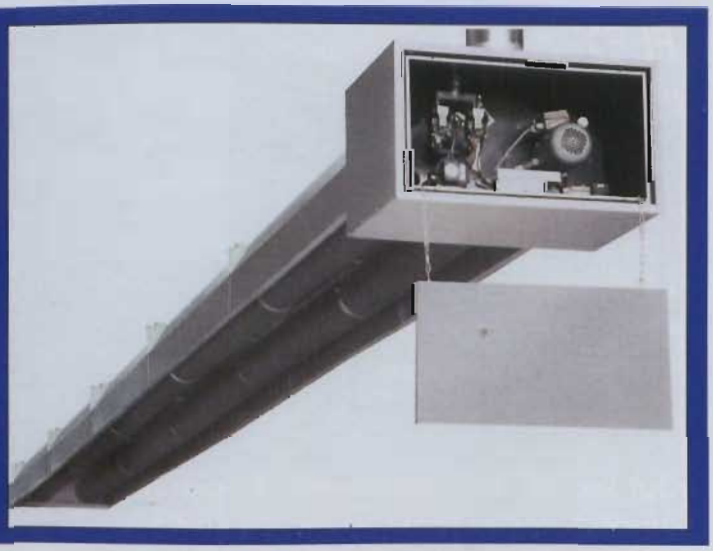
The units incorporate high-quality rotor motor fans, and specially-designed, high-capacity heat exchangers with cooling duties up to 8.5kW under standard UK conditions (ie, NC35 noise levels). Casings are constructed from 1.2mm galvanised steel.

Other features include a fully-insulated discharge plenum as an integral design with many connection options; factory-fitted control options with all major controls companies available; and the ability to alter and modify standards to meet special needs. The new Geko fan coil range is UK-manufactured and tested to the highest standards. Two to three week delivery is available.

Contact: Noel May/Colin Hugget, H&M Engineering. Tel: 01 - 459 1470/71.

Mark Infra Line

Mark suspended gas-fired radiant tube heater. Benefits include energy saving; reliability; value for money; optimum performance; and easy to install.
Contact: Mark Eire. Roger Bolger, Tel: 087 - 259 2099; Michael Keane, Tel: 087 - 252 8325.



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BEMS — Urgent Need for After-Sales Support, Training and Supervision

Building Energy Management Systems (BEMS) consist of one or more self-contained computer-based "outstations" that use software to control building utilities or equipment and report on their performance. Most BEMS are concerned with monitoring and controlling environmental conditions within building envelopes to achieve energy savings.

BEMS were first introduced into the Irish market in the late 1970s. The technology was initially slow to take off due to high installation costs, few demonstration sites, poor support services, and a lack of familiarity with computer-based monitoring and control systems. However, by 1992, over 250 systems had been installed, and by 1994 this number had increased to an estimated 500. Today, there are believed to be over 2000 systems operating in Ireland, *writes Eugene Connolly, Irish Energy Centre.*

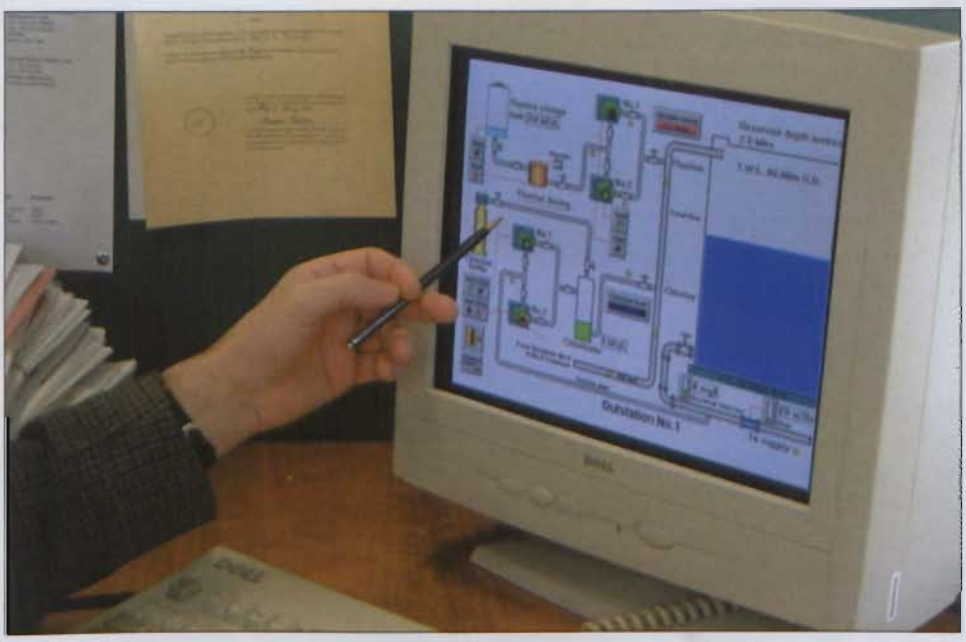
The first step in the installation of a BEMS is a survey of the premises to identify the main energy using plant, the key elements that determine the control criteria (inputs), and the operational points where control can be instigated (outputs). Once a list has been made of the inputs and outputs required, these points are connected to a control box called an "outstation".

Outstations form the main building blocks of the BEMS. Although they can act independently, using their internal software logic to make control decisions on the operation of the plant connected to them, they are normally linked together in a network or modular system. In addition, a supervisory computer is usually connected to the network to allow interrogation or adjustment of the operational criteria as necessary.

This "building brick" structure means that a BEMS can be initially installed as an economical, one or two outstation system, and expanded as required simply by installing another module and connecting it to the network. The greatest expenditure and effort generally comes with the installation of the initial skeletal system. The subsequent addition of outstations is regarded as a relatively straightforward process and, as such, BEMS are much more flexible and expandable than a multitude of stand-alone systems.

A survey of BEMS users conducted in 1992/1993 by ESB and the Irish Energy Centre showed that then, most users installed their systems to control heating, ventilation, and air conditioning and to make savings on electrical demand and lighting. Another survey, carried out in late 2000 by the Irish Energy Centre on 52 current BEMS users, now showed that BEMS are being used to control and monitor utilities/energy and for environmental monitoring and control. Some of the responses to the 2000 survey indicated a marked increase in the use of BEMS in areas such as project identification, costing/budgeting, provision of management information, and maintenance planning.

The 1992/1993 survey showed that BEMS resulted in average savings on energy costs of 13% on industrial sites and 10% on commercial premises. Other benefits revealed by the survey included direct plant and process control, effective maintenance management, centralised supervision and operation, as well as the normal energy and environmental monitoring and control functions one would expect. Indeed, links to fire and security systems are quite common bonus facilities with the present installations.



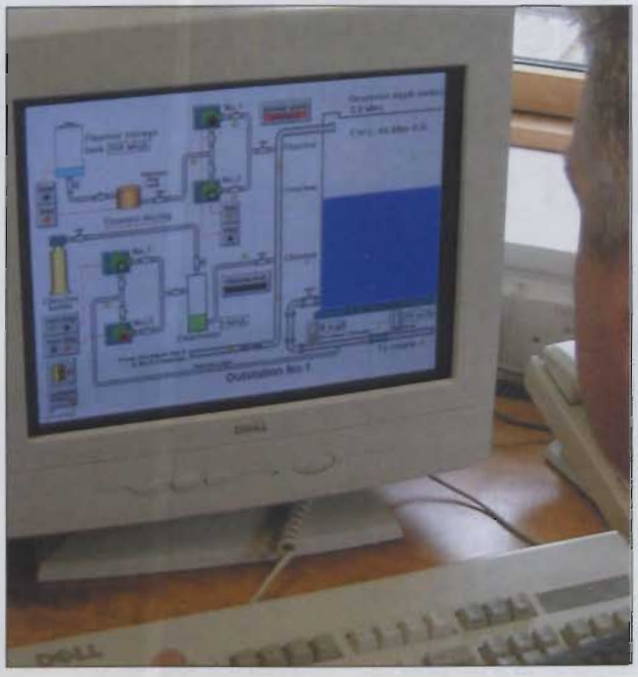
A supervisory computer is usually connected to the network to allow interrogation or adjustment of the operational criteria as necessary

The fact that the majority of users will return to their original suppliers and that 81% of respondents to the 2000 survey expect to undertake some future expansion of their BEMS indicates that most users are generally happy with the performance of their systems.

Despite the numerous benefits provided by BEMS, most users have experienced some difficulties with the technology. The majority of respondents to the 2000 survey experienced difficulties with hardware, software, after-sales service, inadequate training, and insufficient system supervision. Software problems were the most common problem, being cited as a source of difficulty by 31% of respondents, while hardware problems were almost as common at 25%.

Twenty-seven percent of respondents indicated training and after sales services as being problem areas, while lack of resources for maintenance and system supervision were cited as problematic areas by 21%. Thirteen percent of respondents claimed that they had insufficient time to interrogate and operate the system, which further indicates a resource deficit. In addition, 12% of respondents said that they had not been supplied with operational manuals, and 15% said that changes or upgrades were not recorded.

This, along with the claims that training was insufficient, indicates that customers were not provided with adequate information on BEMS.



There is now a unique opportunity to make computer-controlled buildings the norm

Such deficiencies would have had a major impact on system performance, as an inability to understand or operate the BEMS greatly impinges on its effectiveness. Companies also experienced difficulties in relation to the efficient control of their systems. Four percent experienced difficulties due to a lack of centralised control, while 8% found that there were too many unrestricted system operators.

The results of the 2000 survey indicate the importance of BEMS having a dedicated champion to organise, update, and streamline the system. Not only that, but ideally, there should be two or three individuals who have an extensive knowledge of the system to ensure that, even if the BEMS champion leaves the company, there is not a total loss of system functionality and knowledge.

The survey results also suggest that more post installation and refresher courses are necessary for BEMS customers. A facility that would enable BEMS users to communicate the problems they have encountered would be helpful to both supplier and customer as it could provide the opportunity to iron out these problems at the design/manufacture stage while providing enhanced customer service.

Although the number of companies using BEMS has greatly increased over the past decade, there is still plenty of room for growth of the technology. Ideally, all new buildings should be equipped with a BEMS as a matter of course since the cost of installing a system is significantly reduced if it is done while the building is being constructed and minimal when the life cycle costs of the building are considered.

Given the extensive amount of new building projects and refurbishment being carried out at present in Ireland, there is a unique opportunity to bring about a situation in which computer controlled buildings are the norm rather than the exception.

In order to raise the profile of BEMS, it is important that senior management are made aware of the benefits that it can provide, particularly in relation to cost savings. To date, the technology has been sold primarily as a facilities management tool with the cost-centering facilities being overlooked. It is important that senior management perceive BEMS as being of strategic benefit. If they were made more aware of its potential as a feed to cost management and control systems, they might be more inclined to support the installation of the technology. Ultimately, the installation of a BEMS can help to achieve an improved bottom line for the user, and this fact needs to be publicised and emphasised.

All in all, it looks as though there will be a significant demand for BEMS in the coming years if the technology is properly marketed. It is hoped that, as potential customers become more aware of the benefits it can provide and as the technology becomes even more user-friendly, BEMS will become a standard facility in all buildings.

A comprehensive technical guide "Building Energy Management Systems – Good Practice Guide 1" and a number of case studies are available from the Irish Energy Centre, and may be ordered by e-mail from info@irish-energy.ie.

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The New VARISPEED E7 Inverter

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Evolution not Revolution

Evolution is a word that has been used in everything from Darwin's original theories to the latest vehicles on the World Rally Circuit, but it certainly is the only way to describe the current state of Cylon Controls Unitron system for building automation.

Evolution is the practice of building on strengths to continually improve a product, and this is the background to what has recently become known as Unitron 2000. Probably the most significant change from the previous Unitron system to most users will be the addition of a new range of UCU individual room controllers for VAV, fan coil and chilled ceiling applications. Less immediately obvious, however, is the fact that the latest UC PG-R controllers for main or general-purpose plant control, and the UCC4 communication controllers for networked installations, are also all new, supporting Cylon's latest local keypad technology in the UCKRA420 display.

The UCU family offers clients the considerable benefits of a "fit-and-forget" design for zero maintenance, while retaining the free programmability at the core of all Unitron systems. The use of modern developments in super capacitors allows Cylon to protect controller memory during power failure conditions, using a non-volatile EEPROM to ensure that control strategies and setpoints are retained when power is unavailable for longer periods, 40+ years!! This means that, once installed, there is no requirement for a UCU to ever see the light of day unless it needs to be replaced, a rare occurrence in today's world of reliable electronics.

Even commissioning can now be achieved by remotely connecting new commissioning software, now revised for the Palm™ operating system to suit the current generation of hand-held devices. Other benefits include the ability to be shipped pre-programmed with standard strategies, perhaps directly to the terminal unit manufacturer (who will no doubt also be pleased to note the reduction in physical size when installing a UCU), yet still supporting re-programming on site to suit changing customer requirements.

In main plant applications, the new UC PG-R controllers take Unitron installations into new areas with versions from only eight physical points up to 24, all suitable for either networked or stand-alone application supporting modems, local keypads and Cylon's WN3000 supervisory software directly. Relays are also now included as standard.

The latest UCKRA420 displays which complement these and the new UCC4 controllers can be panel-mounted in the plant room, or can take a local user interface out of the plant room to be wall-mounted in an office or corridor. They are even suitable for portable "hot pluggable" use.

Additionally, Unitron systems now support client/server installation over Ethernet and other networks, and can make the location of the user's supervisory PC independent of the physical location of the control system hardware.

What about your Intranet? WN3000 also now serve up real-time building data that can be built into web pages on your Intranet for use from any PC in the building.

Who uses a pager in today's world of cheap, easily-accessible mobile phones? The latest WN3000 adds to its pager functionality with SMS (Short Message Service) text delivery of alarms straight to a mobile phone, or even to e-mail.

These facilities or products can be added on to any existing Unitron installation. It is interesting to note that most enhanced features available in Unitron 2000 originate from requests by existing users of Unitron systems' Cylon Controls, the "listening" controls company!

Contact: John O'Driscoll, Cylon Controls Ltd.
Tel: 01 - 245 0500;
Fax: 01 - 245 0501;
Website: www.cylon-controls.com

Cylon UCU10VAV Controller and UCKRA420 Remote Keypad

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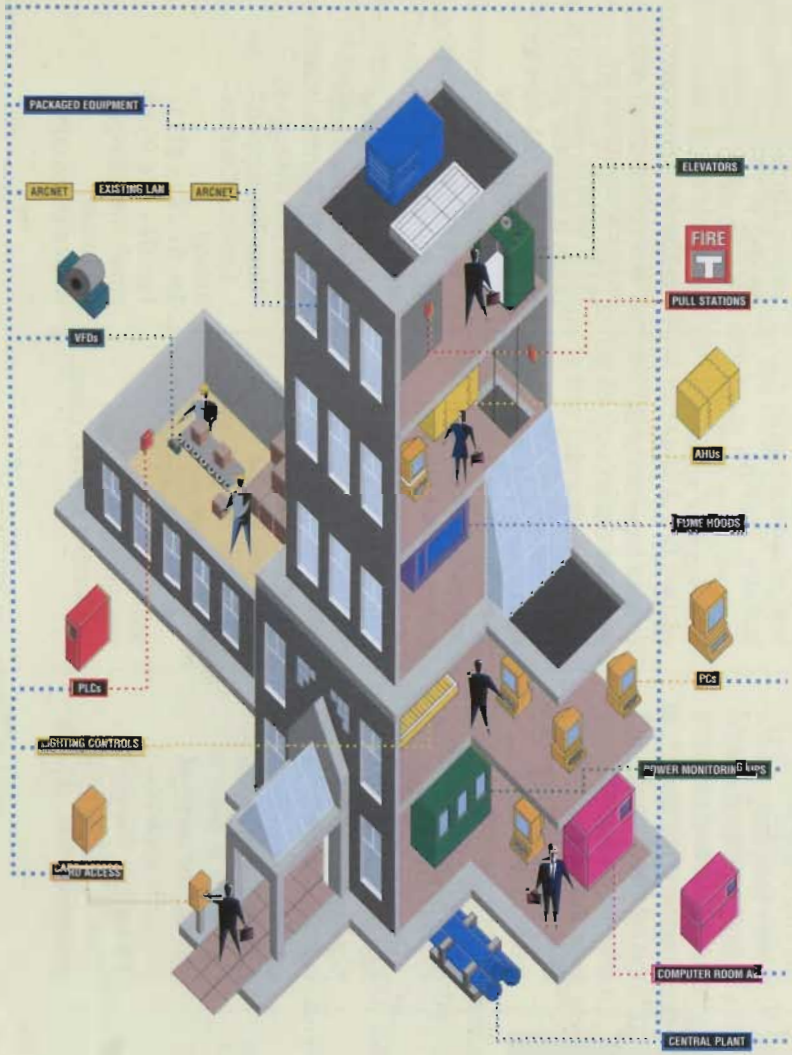

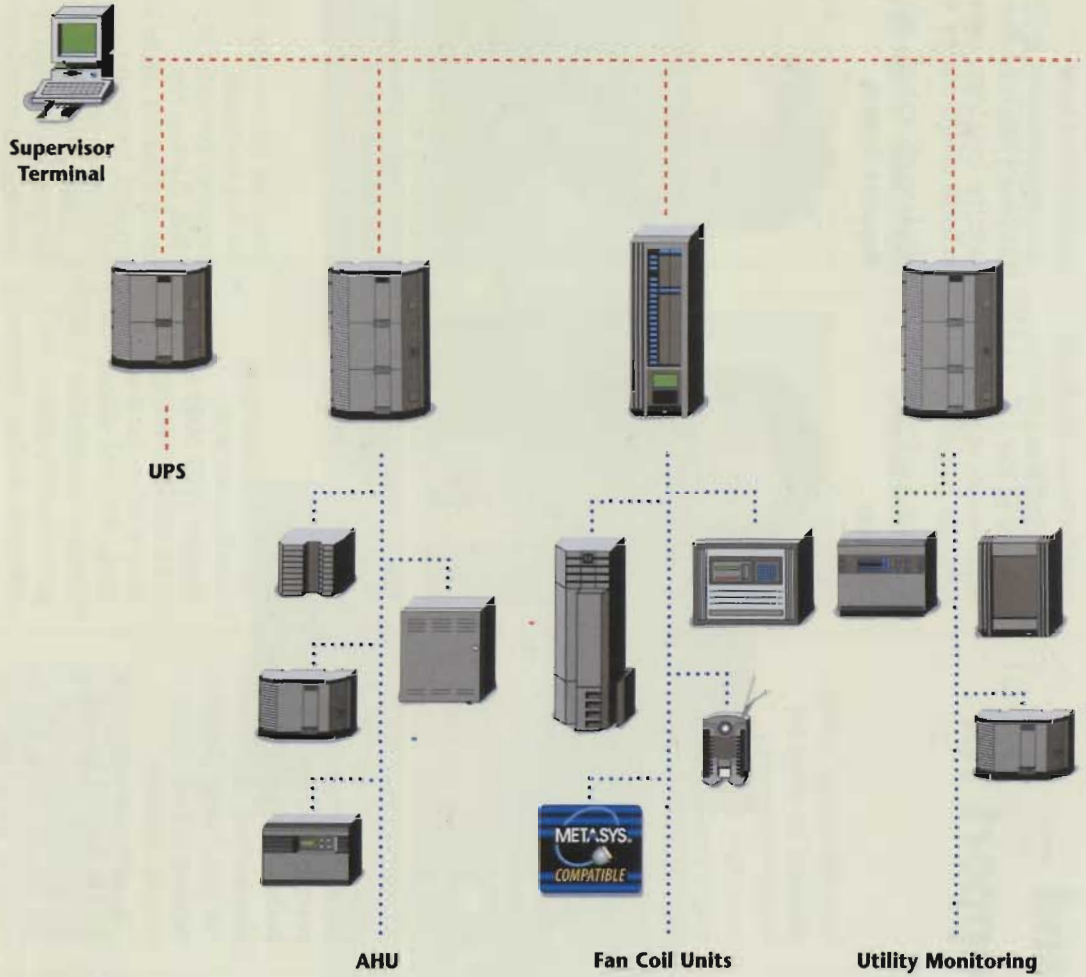

Danfoss Ireland — Three-Tier Support for Speed Drives

Since 1968 Danfoss A/S has produced frequency converters for the control of AC Motors. Danfoss Ireland Ltd has three clearly-defined areas of expertise, dedicated to VLT® Speed Drives applications, i.e. HVAC Projects Section; Process Industry Section; and a Service Support Centre Section.

While operating as separate entities charged with specific responsibility for particular issues, they do nonetheless cross over and support one another for particular customers where appropriate. Brief details of each of the Divisions is as follows:-

Brian F. Maguire, Sales Manager, HVAC Division.

HVAC Project Division

Through the development of a comprehensive VLT® Speed Drive range the company has produced a dedicated drive for the building industry with specialised plant items such as air handling unit fans and pumps. Apart from the energy savings obtained by using the theory of frequency converters, the drives offer a longer lifespan to the motors through precision control.

As far back as the early 90's, Danfoss Ireland created an awareness of the benefits of drive technology for the HVAC industry. This was mainly done through a series of educational seminars to which a cross-section of consulting engineering practices and government bodies were invited while also working closely with the Irish Energy Centre in support of their efforts towards industry.

As with every new idea, it takes time to develop the thought process of the industry to accept the changes, particularly the earlier misgivings about the cost implications.

John Sampson, Managing Director of Danfoss Ireland Ltd, recognised the benefits of this new technology and selected a team of experienced personnel from the building services sector to develop frequency converter-based solutions for all industry types.

Over the years Danfoss has proceeded in Ireland highlighting energy saving with VLT®, and continues to manufacture high-quality frequency converters in order to combat the waste of energy in applications throughout the world.

The VLT 6000 Series dedicated HVAC drive is manufactured specifically for the building industry to cover all the requirements of this particular sector.

Industrial Process Division

Edward Keating, Sales Manager, Industrial Process Division.

Danfoss also develops, manufactures and markets VLT® 5000 and VLT® 2800 Constant Torque Drives for the wider industrial market. Working as a reliable partner within drives solutions, Danfoss offers a complete programme of frequency converters for a host of applications in industry. Danfoss engineers have extensive knowledge of application needs and can offer process expertise at all stages of design, development and implementation. They work closely with the client to ensure optimal solutions for individual needs. Thanks to a modular product range, Danfoss Ireland combines relatively few components into a multitude of variations and solutions, while passing the economic benefits onto the end-user.

At Danfoss, a reliable solution is an uncompromising, and well-tested solution using products that have demonstrated their ability to operate without hassle over the long term, even in harsh environments.

After Sales Service & Support Centre

Bruce Higgins, Manager, After Sales Service & Support.

Since the introduction of the first oil-cooled frequency converter in 1968, Danfoss has become market leader in this field. Increasing competition and increasing demands on the product, resulted in some special qualities becoming much more important, such as Global Service. Danfoss Drives decided in 1998 to concentrate on global service for its customers worldwide. This means that service support and technical assistance for VLT® Variable Speed Drives is available 24-hours a-day, 365 days a year throughout the world.

The Service Mission is to provide customer oriented after-sales-service ensuring the customers satisfaction.

Locally, Danfoss Ireland offers this through its "three-tier support".

Contact: Danfoss Ireland.
Tel: 01 - 626 8111;
Fax: 01 - 626 9334;
email: marketing@danfoss.ie
www.danfoss.com

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GRUNDFOS

Integrated Building Management System from Honeywell

The UK's first integrated building management system has been installed at Belfast's St£91 million Odyssey centre, using Honeywell's Enterprise Buildings Integrator (EBI) to provide seamless "single window" access to fire, security, access control and building energy management systems. Odyssey is Northern Ireland's largest-ever civil engineering project, comprising four venues. The first to open has been the Arena, a 10,000-seat indoor sports and entertainment stadium.

The other venues are "W5" (whowhatwhenwherewhy), an interactive science, engineering and technology centre; a Sheriden IMAX® cinema; and the Pavilion including a 12-screen multiplex cinema and a two-storey of restaurants, bars and retail outlets. These will open during 2001.

The complex has three control rooms from which Honeywell EBI's open architecture and robust user interface provides seamless access to real-time and historical data from all subsystems, from fire and security to energy management. Critical decisions can be made quickly, with positive effects on safety, security and energy efficiency.

The control rooms are distributed across the complex: one serves the Arena, the second the W5 centre, the third both the Pavilion and IMAX cinema. As the EBI terminals across the site are networked, each control room can supervise its own part of the complex during its own public opening times, then hand over supervision to operators elsewhere at other times.

Ballymena-based J B Electrical was contracted to supply all electrical services for the entire 23-acre site. It contracted two Belfast-based systems integrators in two specialist areas: The Diamond Systems Group for CCTV, security and access control, and ATC Systems for the complete building energy management systems. Both are accredited systems integrators to Honeywell's Home and Building Control business, the global leader in building system technology, which provided the management systems themselves. In practical terms, Honeywell supplied the fire and security system equipment to Diamond Systems, and the building management system to ATC; then supervised the installation of the EBI software to enable all the subsystems to link seamlessly.

Underpinning the whole installation is a structured cabling infrastructure provided by specialists from Honeywell Network Solutions. This provides over 650 outlets for site management terminals and control desks, as well as the field-mounted devices. These are for temperature, humidity and ventilation monitoring and control, building intruder detection and surveillance system, security access card readers, CCTV cameras and telemetry control. All connections are made using standard RJ 45 outlets. The structured cabling infrastructure not only simplified installation but will also result in long-terms cost savings by enabling changes and upgrades to be achieved quickly and easily, without the need for rewiring.

As Northern Ireland's Landmark project marking the new millennium – one of 12 projects awarded funds by the Millennium Commission – the Odyssey's Project's management were looking for innovation and use of "best practices" to provide a building that represented the new millennium and contained the very best of

Belfasts' ST£91 million Odyssey Centre, Northern Ireland's largest ever civil enginering project

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ABB Building Management Systems

Control made Simple

With the increasing focus on control of your buildings, plant operation, energy usage and costs becoming more vital, the need for an efficient Building Management System has never been greater.

ABB can offer you an effective Building Management System that will make the control of your building requirements, conditions, plant and costs simple and flexible. From terminal units to main plant and entire buildings, ABB Building Management System helps you to maintain the long-term serviceability of your property and its value.

The main features of this system include:-

- Low installation costs
- Ease of expansion
- User-friendly displays
- Reduced operating costs

ABB

Asea Brown Boveri Ltd,
Belgard Road, Tallaght,
Dublin 24.
Tel: 01 - 405 7300
Fax: 01 - 405 7324
Website: www.abb.com

the latest technologies, so providing a living example of technology in buildings today. Diamond Systems and Honeywell proposed an intelligent building infrastructure that would not only support the building services specified at the outset but would also provide superior flexibility to add and change these systems in the future.

Within Ireland, no single company was able to provide the expertise necessary to bring a fully-integrated infrastructure together, so Honeywell agreed to work as a catalyst and mentor to the local firms that would deliver the subsystems in a way that enables them to integrate seamlessly. With this integration, information can be transferred between systems so that the client can manage all aspects of the complex from any terminal.

Three applications can be accessed under EBI from any PC. First, Honeywell LifeSafety Manager provides primary monitoring and full control of the building's smoke and fire detection systems – which employ over 1000 intelligent smoke detectors – as well as the safe evacuation of occupants. Its seamless combination of event information, response prompting and tracking capabilities makes it an exceptional incident management and regulatory compliance tool, as required by local codes of practice.

The second application, Honeywell Security Manager, allows operators to control and monitor access and security throughout Odyssey and its grounds. It provides centralised alarming, cardholder management and the ability to acquire and use data from human resource databases. There are 60 access control points with card readers, numerous movement detectors and over 100 door alarm contacts. Almost 100 CCTV cameras are installed throughout the complex, mainly full function PTZ domes. All the devices communicate via the structured cabling system. The security application has comprehensive reporting capabilities, with pre-configured standard reports and the ability to create reports customised to the facility's needs.

Third, Honeywell Building Manager integrates and controls the building's HVAC systems, lighting and energy usage. It maintains an extensive historical record of building data, which can be collected at intervals from one second to 24 hours. Therefore, in addition to alerting operators immediately when an abnormal building condition occurs, Honeywell Building manager makes it easy to analyse long-term operational patterns and so ensure optimal performance.

Contact: Finn McCool, McCool Controls. Tel: 01 - 855 0542; Fax: 01 - 855 0546.

Remote Mobile BEMS Access from Trend

If you are involved in the area of facilities management, you will undoubtedly recognise the following. You're on your way home from the office, or you're enjoying your weekend off when the mobile rings and someone in the facility informs you of a problem or apparent problem at the plant?

Have you or any of your maintenance staff ever had to travel to the facility, or to a home base, PC resident, BEMS software suite, to access the facility and assess the nature of the problem.

If the answer to either of the above is yes, then the new 915 MDS (Mobile Display Software) from Trend could change all that.

The Trend 915 MDS puts the supervision of the BMS installation in your pocket!

It has been designed to operate on a Windows CE hand-held PC. This facilitates the interrogation of your entire BMS installation via the hand-held PC and your mobile phone with data line. All that is required on site is a Trend modem.

The 915 MDS can also connect to the Trend network via a standard network connection.

When the hand-held unit is connected directly or via your mobile phone, it will give access to the following — occupation times, device address, values of sensors, digital inputs, setpoints, switches and drivers, etc.

Benefits

— Remote access to IQ controller configuration via GSM phone
— Works on Windows CE handheld operating systems or standard PC
— Specifically designed for mobile users
— No set-up required – works "straight from the box"
— Operates direct-connected or networked
— Dials via integral modem or pc-card modem
— Connects via PSTNland line or GSM mobile phone

Contact: Sales Department, Standard Control Systems. Tel: 01 - 624 6100; Fax: 01 - 624 6105; email: Info@standardcontrol.ie

The new 915 Mobile Display Software from Trend

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Dan Chambers Launches Advanced Energy-Saving AC Inverter

Dan Chambers Ventilation has struck an agreement with Japanese AC drives manufacturer Yaskawa Electric to market that company's new HVAC range of high-quality, variable speed controls into the heating, ventilating and cooling markets.

Yaskawa's next generation of advanced energy-saving variable speed drives is manifest in the latest Varispeed E7 AC inverter. The E7 incorporates a number of new features not found in any other drives to date, which make it ideal for any type of fan, pump or compressor applications, including heating and ventilation.

The company has been able to significantly reduce the acoustic noise at low carrier frequencies, leading to a quieter drive. There is an automatic energy-saving function that will win considerable favour from those looking to reduce their electricity bills.

The E7 employs Yaskawa's unique high-slip braking technique which enables periodic and emergency braking without the need for brake units or braking resistors. Finally, in Japanese tradition, the drive is claimed to be substantially smaller, cheaper and longer-lasting than any previous inverter!

There are differences in the hardware of the new drive. For instance, removable control terminals have been incorporated to make installation and servicing much simpler. A DC reactor is built in to all drives from 22kW upwards, reducing installed costs and reducing the size of the drive. The drive uses 4th generation IGBT technology for its solid-state switching and also has improved short circuit protection. The unit has a motor thermistor monitor capability and on/off control of the cooling fan extends working life.

In software, the latest developments enable the user to select between auto tuning in non-rotating mode or under load in a dynamic routine. New speed search facilities have enabled better capability to catch a spinning motor in either direction, for instance in extraction fan applications where the fan may be contra-rotating under air movement on start up.

Programming the new E7 is simple, on or off line, and is made easier

The Yaskawa Varispeed E7 AC inverter which is now available from Dan Chambers Ventilation

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web enable your buildings

With an all new controller and keypad range, the UNITRON 2000 system delivers fuss free installation and low lifetime operating costs. And because you are moving with the times UNITRON 2000 is TCP/IP ready. Serving information by intranet, extranet or the web direct from your building management systems. What could be easier? For further information contact John O'Driscoll today on 01 8366626.

unitron 2000

CYLON

experience tomorrow's control today

Cylon Controls Ltd, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17. Tel: +353 1 - 245 0500; Fax: +353 1 - 245 0501; Web: www.cylon-controls.com

by the built-in Parameter Unit featuring a "copy function". Programming functions can be extended through the use of Yaskawa's proprietary application specific software and a further optional extra is a seven-language LCD operator panel.

All models support RS424/485 communications, DeviceNetTM and Profibus-DPTM as standard. Option cards are available for Interbus-STM, CANopenTM and CC-link field networks.

Yaskawa has designed the E7 to be a universal quick start drive spanning fan and pump applications. In all instances the new model is claimed to be extremely cost effective. The range is covered by global certification for CE, UL and ULc. The Yaskawa E7 ranges from 0.4 to 300kW at 400V, and 0.4 to 110kW at 200V.

The technical specification is impressive enough but how does the drive work in practice? The Yaskawa E7 drives provide remarkable energy savings in some applications. One company that elected to install the variable speed drives to its chillers saved 28% on its power consumption.

Essentially, the customer identified that it was possible to run the pump motors at lower speed without loss of performance within the chillers. Not only has energy been saved, but all the moving parts have increased lifetimes and vibration has been lowered, reducing the chance of refrigerant gas leaks as a result.

Previously, the motors had been running 24-hours a day. The common method of store temperature control is to use a "pump down" system. That is, when the temperature needs to drop it is lowered to a point below that required. A thermostat then switches off a solenoid valve which controls the feed of refrigerant to the air coolers. This in turn creates a reduction in pressure at the compressor, which once detected by a pressure sensor switches off the compressor motor. By using the Yaskawa inverter, the motor can be controlled to run more slowly at low demand times, enabling a more consistent pressure to be maintained while retaining more accurate control over the refrigerant flow and hence the temperature within the chillers.

By fitting Yaskawa inverters and given that the electricity bills have been as high as £100,000 a year, the savings are substantial.

Contact: David Lindfield, Dan Chambers Ventilation.
Tel: 01 - 830 3222;
Fax: 01 - 830 8888;
email: davidlindfield@danchambersventilation.ie

Pointer Controls Moves into the Mansion House

The Mansion House, one of Dublin's most renowned civic buildings, has been equipped with a building management system by Pointer Control systems.

As part of a refurbishment programme at the official home of the Lord Mayor, Pointer has completed the design, supply and commissioning of a stand-alone building management system to monitor and control the plant serving the Grand Round Room used for civic and mayoral functions, public restaurant and the kitchens.

Under the contract, won in competitive tender, Pointer designed and installed three motor control panels and introduced an operator's key-pad interface to communicate with air handling units serving the compensated radiators and ducted air heating systems.

Staff from the on-site caterers and Dublin Corporation, who are responsible for the upkeep of the Mansion House, were trained in the use of the system as it incorporated time schedules drawn up to take account of the varying uses of the premises.

Contact: Pointer Control Systems.
Tel: 01 - 830 0533;
Fax: 01 - 830 0543;
Email: pointes@iol.ie
Website: www.iol.ie/pointercontrols

The Mansion House in Dublin which has been equipped with a building management system by Pointer Control Systems.

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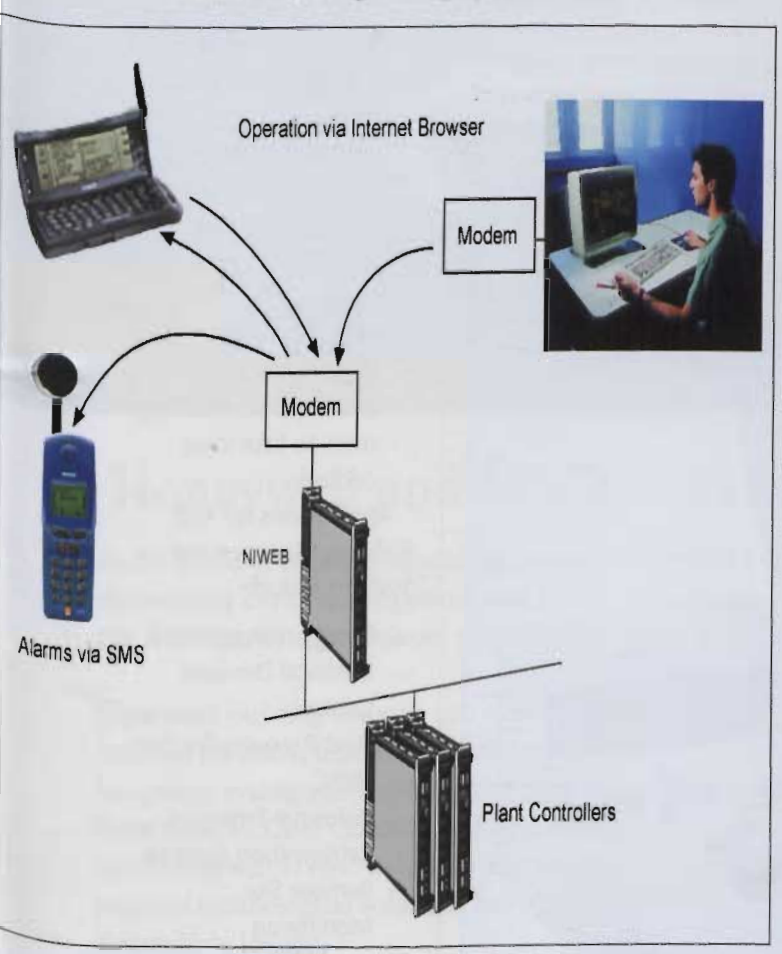
Siemens Gets Mobile on the Net

The internet is fast losing its novelty factor and becoming a powerful business tool, enabling improved business-to-business communications that can be conducted via the modern mobile phone whether the user is in or out of the office.

With this in mind Siemens Building Technologies has taken the new age of mobile communication a step further with the introduction of the NIWEB interface, allowing building and facilities managers direct contact with their building control system no matter where they are in the country ... or even the world.

NIWEB utilises existing proven communications technologies to allow building managers or maintenance contractors to remotely access the INTERGRAL RS building control system in order to check the status of the HVAC services. If necessary, parameters may be adjusted using either a standard internet browser via PC, or an integrated micro browser on a mobile computing device. No additional software is required. Alarm messages in SMS format can be sent direct to mobile phones.

Contact: Sirus Engineering Systems Tel: 01 – 460 2600.



Siemens NIWEB interface allows building and facilities managers direct contact with their building control system no matter where they are in the country ... or even the world.

ABB Building Management Systems

With the need to control internal environments, plant operation, energy usage and building running costs becoming more and more demanding, the requirement for effective, performance-led, building management systems has never been greater. While various solutions are put forward by different manufacturers, ABB — one of the world's leading and innovative controls developers — has launched a building management system based on a single technology capable of serving terminal units, main plant and entire buildings. Whether it is energy management for small premises, or facilities management for large estates, the same basic components apply.

Features and major benefits of the ABB Building Management include low installation costs, ease of expansion, user-friendly displays and supervisors, and reduced operating costs. This helps maintain the long-term serviceability of the property and of course its value.

The ABB Building Management System is based on a 3-layer network architecture which allows for expansion from just one to literally thousands of controllers. At the control level an ABB field bus links local plant while, on larger systems, high-capacity, faster building networks integrate these for site-wide control.

All ABB Building Management Systems accept supervisors and remote communications directly at control level but, larger building users invariably require a third level for management and integration. This system is a service-based LAN, enabling building management to merge with other tasks such as maintenance scheduling or monitoring and targeting. At each level ABB Building Management Systems use industry-standard communications that are easily installed, are reliable, and are proven in application.

With ABB Building Managements Systems the services/building manager can:—

- Easily set and change time schedules;
- Access all of the parameters and data needed to effectively and efficiently run HVAC and other building services;
- View and adjust variables such as temperature and humidity, and log the results;
- Let the system monitor plant and notify the service provider as faults occur;
- Give responsibility to non-technical staff and enpower building users to take local control;

Applications for ABB Building Management Systems include:—

- Energy management
- Electrical Demand Control
- Heat Recovery/Reclaim
- HVAC
- Industrial Processes
- Refrigeration Systems
- Remote Site Monitoring

Contact: ABB Ltd.
Tel: 01 - 405 7300;
Fax: 01 - 405 7324.

Features and major benefits of the ABB Building Management System include low installation costs; ease of expansion; user-friendly displays and supervisors; and reduced operating costs

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Planning an environmental upgrade for your building?

Honeywell and McCool have your future all mapped out

In the world of building control technology, improving the working environment, conserving energy and raising fire and security standards are paramount.

Honeywell building controls can match the needs of any building precisely, from individual controls to a fully-integrated management control and protection system. Now, with McCool Controls and Engineering Ltd as sole Honeywell HVAC Solutions Partner, the broadest range of technological solutions has opened up in the Republic of Ireland.

Honeywell's reputation for quality and reliability is second to none, while McCool's established position in the Irish building controls industry, with branches in Dublin, Cork and Limerick, ensures a strong and healthy working relationship with all existing and future customers.

If you would like to know more contact:

McCool Controls and Engineering Ltd,
Unit 12 Docklands Innovation Park,
East Wall Road, Dublin 3.
Tel: 01 - 855 0542; Fax: 01 - 855 0546
Cork – Tel: 021 - 382055
Limerick – Tel: 061 - 372277

Honeywell

Integrated BMS Technological Leadership from Thermo Systems & Johnson Controls

The Johnson Controls Metasys M5 workstation brings technological leadership to the Irish market.

Metasys M5 operator workstations are easy to use and capitalise on internet-based purchasing from Maximo and other facilities management systems to make mission critical facilities operations more attainable than ever.

Remote monitoring of multiple facilities is also a significant feature offered.

Metasys is also practically unique as it is a validatable BMS.

Operators of the system simply click and point through dynamic, full colour, graphics of floor plans, video, voice, system electrics and trending data.

Interactive changing of system schedules and controls is fire-wall protected.

The Operator Workstation uses standard hardware platforms and runs in Microsoft Windows '98 or NT environment. Network Control Modules provide central monitoring of alarms, and they collect and store data on historical trends, equipment runtime and energy consumption. Plus, M-Web lets you monitor systems and equipment from anywhere in the world via the Internet.

The M5 Workstation combines the best industry standard hardware and software with Johnson Controls 100-plus years of control experience to create an easy-to-learn and use, yet powerful interface to the Metasys Network. With all of these advantages, your decision couldn't be simpler ... the M5 Workstation and the integrating Metasys Network are the perfect solution to assist you in managing the needs of your dynamic enterprise.

Johnson Controls Network Controllers

Contact: Aidan Lynch, Thermo Systems.
Tel: 01 - 493 1701;
Fax: 01 - 493 1746;
email: aidan.lynch@thermosystems.ie

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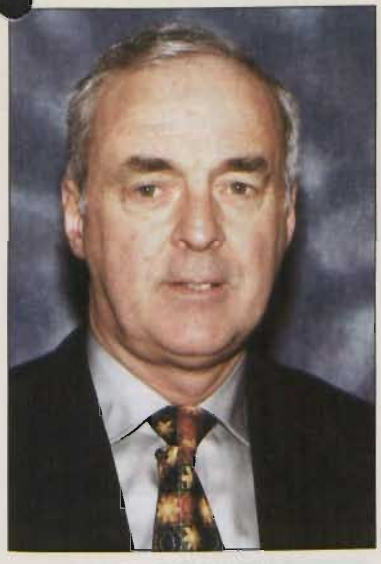
Training & Career Development is the title of a new BSNews series aimed at assisting those who want to upgrade their qualifications and knowledge but don't know how to go about it. It will be presented in conjunction with the DIT, Bolton Street, with Seamus Murran — DIT's Head of Department of Construction Skills — providing the relevant information. We have already received quite a number of questions but invite anyone who has a query vis a vis training or career development to send a brief note to BSNews, Carraig Court, George's Avenue, Blackrock, Co Dublin.

Ask the Expert



Seamus Murran, Head Department of Construction Skills, DIT Bolton Street

I have worked as a plumber for 20 years but have no formal qualifications. What can I do to get some?

This is a difficult area to offer advice on as there are many unknown aspects to the question. If you can furnish written proof of when you started and finished your apprenticeship — and a number of other important items — you can apply to FAS in Baggot Street, Dublin 4, for a National Craft Certificate in Plumbing.

If you wish to take a course to get the formal qualifications, contact the Plumbing/Refrigeration Section, Construction Skills Department, DIT Bolton Street, Dublin 1.

National Craft Certificate (NCC)

The National Craft Certificate is currently awarded jointly by the Department of Education and Science and FÁS. It attests to the successful completion of the apprenticeship programme and increasingly is becoming a required qualification for Irish craftspersons who wish to find work at home or in other countries.

It is likely to become an essential requirement for working as a craftsperson in the future.

Requirements for the award of NCC

To qualify for the award of a National Craft Certificate (NCC) applicants must provide proof that they have:

— been registered with FÁS (formerly AnCO)

— served the full period of apprenticeship

— completed the first year "off-the-job" training course (may be waived in certain circumstances)

— attended the full educational release programme

— achieved a pass grade in the following:-

- First year assessment programme and terminal test (may be waived in certain circumstances)
- Department of Education and Science Junior Trade Written Examination
- Department of Education and Science Senior Trade Certificate or
- Have successfully completed all phases of the New Apprenticeship Scheme for those who are registered accordingly

For the old 'time served' apprenticeship, an apprentice must provide proof as listed above and then "apply" for the NCC. With the standards-based apprenticeship, an apprentice who successfully passes all phases (7) will be awarded the NCC automatically and does not, therefore, need to apply

* * * * * *

I run a successful, medium-sized, merchants' outlet. I have two excellent assistants in their mid-twenties and want to upgrade their knowledge in refrigeration. How do I go about it?

The Construction Skills Department of DIT offers a night course in Advanced Refrigeration for students. The course includes refrigeration and air conditioning technology, industrial and commercial refrigeration, etc.

The course runs from September to May of each year and is held on Wednesday night from 7pm to 10pm. Students who successfully pass the final assessment are awarded a DIT Continuing Professional Development Certificate.

INTERNET HOTEL MARKET

Precision Air Conditioning from York and Edpac

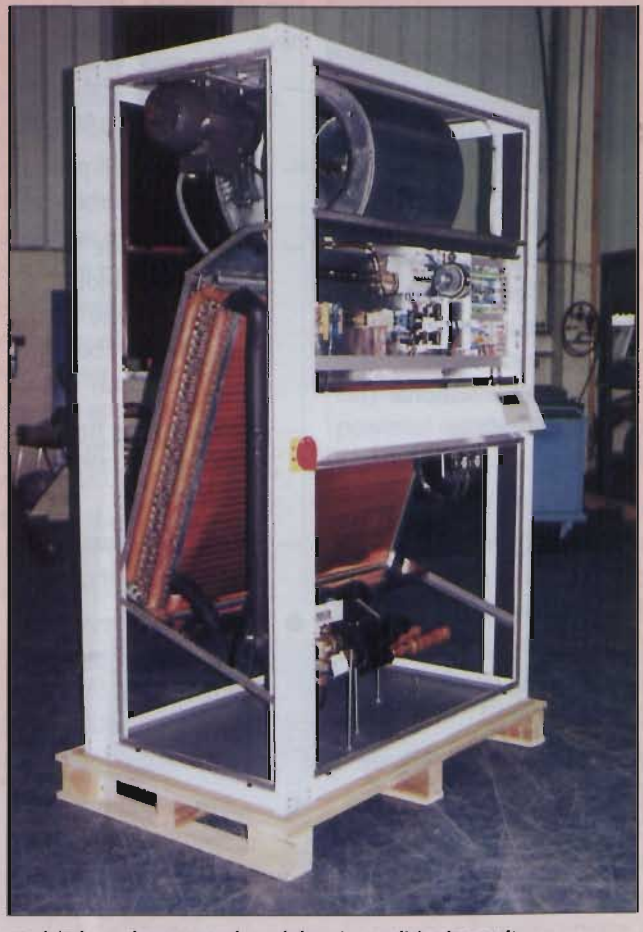
Edpac International (the Close Control Division of York International) recently hosted a site visit to its Cork-based design, test and assembly plant in Carrigaline where senior personnel from both Edpac and York International detailed their plans to capitalise on the massive servicing and cooling requirements of the booming "internet hotel" business. Apparently, current forecasts predict that internet hotels — perhaps more commonly known as international data centres, co-location centres or internet exchanges — will cover 50 million sq ft of Europe in five years time, generating £10.3 billion a year for their operators.

Increased outsourcing of data centre operations by financial institutions, coupled with a large increase in the amount of business to business e-commerce, and the insatiable requirement for broad-band technology requires large data centres or telecoms switching houses. However, the amount of heat generated by the server equipment in these centres is phenomenal, and requires massive servicing and cooling to maintain a secure, temperature-controlled environment.

Opportunities are widespread and York has already secured a substantial competitive advantage by identifying potential clients at an early stage. "We have developed strong relationships with customers in the internet hotel market based on York's European service network and its reputation for providing high-quality products across the Continent. This has led to York securing several global alliance agreements with key internet hotel providers", explained Pat Byrne, Strategic Accounts Manager, Europe. "We are also working closely with the major players in the market as we move through a period of rationalisation and consolidation".

The approach to the provision of cooling taken by each provider is essentially simple. The facilities are typically designed on a modular format allowing additional space to be added when required, and the equipment utilised in each facility is often identical from module to module and site to site.

"Most operators have adopted close control units linked to either multiple air cooled chillers or smaller numbers of large water cooled centrifugal chillers, sometimes with variable speed drives installed to increase efficiency", says Byrne. "The exact specification of water or air cooled chillers is dependent on the customer's needs and site location. In the UK for instance, most projects utilise air cooled chillers whereas the market in continental Europe is driven towards water cooled solutions. To service this demand York's manufacturing facility in Nantes, France has substantially expanded its production of water cooled chillers".



York/Edpac close control modular air conditioning unit

Downflow room units, which distribute air around the facility, are required in large numbers and form a substantial proportion of the cost of the cooling system. York has formed an alliance with close control unit manufacturer, Edpac, which currently supplies room units for 50% of the Internet Hotel projects that York is involved in. "The requirement for delivery of units is huge and, as such, Edpac has geared its production process to keep up with demand. The company is also developing a manufacturing base in the USA to service this expanding market".

A major concern for internet hotel operators is the availability and sustainability of power. Internet hotels use enormous amounts of power and it is estimated that in London alone new data centres will increase power consumption by 20%, with cooling requirements contributing significantly to this figure. As a result, operators are being forced to investigate alternative options such as co-generation. In response to this problem, York is able to provide total co-generation solutions in the form of absorption chiller technology which utilises waste heat from generators to provide cooling.

"York's Edpac precision air conditioning system is specifically designed to provide optimum operating conditions in

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close control environments such as computer rooms, telecoms and specialist applications", says Ciaran Coughlan, Sales & Marketing Director, Edpac International. "It is manufactured in a modular format comprising four different size units providing nominal cooling capacities between 10-100kW. The system is inherently flexible and can be installed as single or twin (duplex) circuits. The duplex configuration allows modules to be positioned at different locations in the room and a single circuit can be simply upgraded to a duplex system with the minimum amount of disruption. The system utilises R407C, R22 or R134A refrigerant and is available in air, water, glycol, ECX and chilled water versions".

Hermetic scroll, high-efficiency compressors have built-in overload protection and are mounted on resilient pads for vibration isolation. Cooling coils consist of multi-row copper tubes with aluminium fins and large surface areas. They are designed to ensure high sensible heat ratios and low airside pressure drops which in turn reduces fan power requirements and noise levels. In addition, large low-speed fans with forward-curved impellers also minimise noise levels, while water-cooled condensers provide high turbulent flows resulting in a compact heat exchanger with low-pressure drops.

Units are fitted with the latest Delta range of DIN rail-mounted microprocessor controls. The control system utilises a main microprocessor interface board equipped with a set of terminals necessary to connect the board to the controlled devices. All software is permanently stored in flash RAM and is therefore protected even in a power failure. Unit software is uploaded to the microprocessor using a RAM key. On multi-unit sites this quickens unit commissioning. The software can also easily be changed or upgraded on site by qualified service personnel. The microprocessor also has optional built-in Modbus and Bacnet communications and full Windows networking capability. When communicating in Modbus or Bacnet the protocol convertor is in the software and there is no need for external Gateways.

DCS/FCS chilled water unit from York/Edpac

"Edpac International already has an established reputation in this market sector", says Managing Director Noel Lynch. "We are very much to the forefront in devising customised solutions for all manner of specialised applications, the wealth of knowledge and experience represented by our 40-strong workforce ensuring that we are forever inventive and pioneering, all the time pushing the boundaries of established practices. A key strength is the low staff turnover. Hence the success we enjoy on the international front with product being shipped to Europe, the Middle East, the Far East and Latin America.

"Growth and expansion are the order of the day. At our Carrigaline base in Cork we go to final assembly and test on all products with something like 2500 sq m of the 2-acre site given over to production and a further 2500 sq m set to come on stream shortly. In addition, there is the fabrication/assembly plant in Limerick, and of course the chilled water plants in Malaysia and the USA.

"While certain markets may mature, the opportunities for Edpac will continue to grow. We work very closely on a partnership basis with end-users throughout the world, anticipating their needs and developing appropriate solutions to meet an ever-changing marketplace. It is a proactive rather than reactive philosophy whereby our contribution is an integral part of the overall development process. The future is clear and we are confident that we will help make it happen."

Visitors on a tour of Edpac's Carrigaline, Co Cork based production facility

Grundfos Open at Blainroe

Gordon Barry and his colleagues at Grundfos Ireland recently hosted the company's annual golf outing at Blainroe Golf Club in Co Wicklow. It was a beautiful summer's day, the warm sunshine enhancing the magnificent scenery of the surrounding countryside. A total of 51 invited guests participated in the outing, comprising a mix of leading consultants, contractors and distributors from all over the country.

The playing conditions were perfect, making for some high-scoring performances which was reflected in the tight margin which separated the various placings.

Nonetheless, Robbie Murray of Dublin Providers in Dun Laoghaire just about shaded it from his playing partner Keith Louth, a customer at the branch. To compound their dominance on the day their three-ball partner Ray Broughan of Grundfos won the longest drive. No prizes for guessing who won the team event!

Other winners on the day were Noel Memory of PJ Clonan, who was third overall; Shay Cuddihy, winner Category A; and Raymond Brady, a customer of Heatmerchants Navan Branch, who won Category B.

After the golf everyone adjourned to the nearby Summerhill Hotel in Enniskerry where the presentation of prizes took place over a magnificent meal. The celebrations continued well in to the early hours of the next day, the hospitality of Grundfos personnel — be it on the golf course or in the hotel — making for a most enjoyable and relaxing event.

Left:L Ray Broughan, Sales Engineer, Grundfos Ireland, presenting second prize to Keith Louth, a customer of Dublin Providers Dun Laoghaire Branch.

Right: Noel Memory of PJ Clonan receiving his prize from Paul Quinn, Service Engineer, Grundfos.

Left: Shay Cuddihy receiving his prize from Niall Larrigan. Financial Manager, Grundfos.

Right: Seamus O' Donoghue, Seamus O'Donoghue Pumps, receiving his prize from Liam McDermott, Sales Manager, Grundfos Ireland.

Left: Gordon Barry, General manager, Grundfos Ireland presenting Raymond Brady, a customer of Heatmerchants Navan Branch, with his prize.

Gordon Barry, Grundfos Ireland General Manager, presenting Robbie Murray of Dublin Providers, Dun Laoghaire, with the overall winner's trophy.

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